

"Butterflies"	narrow part over wound to help approximate; sometimes sutures aren't necessary if they are used after sutures are removed
3 P's	pain, potty, & position
ABD hemorrhage	ridged area first 24-48 hours greatest risk for hematoma after surgery or wound
Abrasion	superficial rubbing or scraping of skin by friction
Absorbable	catgut, chromic (inner layers; not removed)

Acute	happens suddenly and heals in timely manner
Analgesics	45-60 min before (painful procedures or awkward position for dressing change)
Analysis/NU DX	Altered peripheral tissue perfusion (incisions with circulation more compromised), cardiovascular tissue perfusion, cardiac output; High risk for infection (higher priority in some pt), altered nutrition, acute pain
Approximation assessment	What is holding them together? Will it stay approximated?
CAUSE	Intentional, Unintentional, or Trauma

Chronic	takes longer to heal; usually not healing in 6 months (higher infection risk)
Clean	wound without pathogens (ex. Surgical wound, edges approximated & very little portal of entry)
Clean-contaminated	made aseptically but in an area that contains microorganisms (small intestines)
CLEANLINESS (most clean to least clean)	Clean, Clean-contaminated, Contaminated, Infected, Colonized
Cleanse the wound	Method: gentle (don't scrub and dislodge clotting), first priority is to stop bleeding, then clean; Acetic Acid: fro gram positive and gram negative bacilli; Betadine: (Povidone-Iodine) topical anti-infective not to be used on granulation tissue (which is very fragile) - usually right after surgery for painting incision & topical anti-infective; Dakins: irritating full strength (either half-strength or 1/4 strength, expecially used for staph & strept)

Cleanse the wound:  
Hydrogen Peroxide

chemical debridement (primary function)  
- cleaning the wound of drainage and any  
necrotic tissue; not for granulation  
tissue; not for deep puncture wounds  
(those heal by secondary intention)

Cleanse the wound: NS/NSS

needs to be sterile; used frequently  
to clean wounds, particularly  
surgical wounds; used for  
mechanical debridement and to  
loosen stuck dressings

Closed

something like contusion;  
ecchymosis (not very  
concerned about infection  
because there is no portal of  
entry)

Colonized

more than one type of  
organism present

Contaminated

often occur traumatically  
because of work accidents or  
MVAs; pathogens are likely

Control Bleeding	<p>Direct pressure, elevation (reduce blood flow)</p> <p>Laceration: reinforce dressings for bleeding (put another one on top; apply pressure)</p> <p>Penetrating wounds: control the bleeding (stabilize penetrated object on each side so as not to cause as much trauma)</p> <p>Perforating wounds: obvious hole (gunshot), usually more bleeding; cover the hole and area for cleanliness</p>
Contusion	ecchymosis; caused by bleeding in deeper tissues
Dehiscence	partial or total separation of wound edges (any wound may have dehiscence)
DESCRIPTION	Abrasion, Contusion, or Laceration
Diabetes	<p>Decreases circulation (decreased elasticity of blood vessels) - necrosis</p> <p>Decreased oxygen to tissues</p>

Drainage Types

Sanguineous,  
Serosanguineous, Serous,  
Purulent

Emergency assessment

first responder to MVA  
(bleeding - direct pressure)

Environment

clean vs. dirty

Epi

upon (sits upon dermis)

Evisceration

protrusion of visceral organs  
(viscera = guts; any wound  
cannot eviscerate)

Explain procedure	"If you need to sneeze or cough, please turn away from incision; do not touch incision."
Femoral catheterization	pressure on area needed; five pound sandbag; palpate for anything that feels abnormal; always assess that site with heart patients
Fistulas	abnormal passage between two organs or an organ and the outside of the body
Goals	Bleeding control (assess pulse and BP); Comfort (pain medication - need pain control to walk so they don't get blood clots; nausea medication; cool washcloth on head or neck can relieve nausea; positioning of pt & correct alignment; emotional comfort)
GOALS (continued)	Infection prevented (prevent pressure ulcer from occurring; falls when on narcotics and anti-emedics); optimal function regained (person is functioning to the best of their ability); skin integrity maintained (length of time in surgery); wound healing increased (systemic, rest, nutrition) - decrease trauma to the area

Growth factors	medications given to increase cellular growth and the healing process; Anabolic steroids: builds protein stores in the body (prn)
Hematoma	collection of blood (superficial or deep)
Hemorrhage	excessive bleeding (can be life-threatening) - hypovolemic shock; can be external or internal (may esp. happen in peritoneal)
Hemostasis	stopping bleeding; vasoconstriction is occurring in blood vessels to decrease blood loss; clot formation; platelet aggregation (occurs seconds to minutes after injury); natural body function preventing hemorrhaging
HW	hand wash - AFTER CLEANING TABLE



Impaired Oxygenation

Smoking (nicotine)  
Respiratory disease

Implementation

Control bleeding; growth  
factors; Cleansing the wound

Individualize

prioritize, consider needs:  
education; establish goals

Infected

larger quantity of greater  
than 10 to the 5th power per  
gram tissue

Infection

usually seen in traumatic  
wound in 2-3 days & surgical  
wound in 4-5 day

infection	increases stress on a wound
Inflammatory	vasodilation; phagocytosis (WBCs eating pathogens); lasts approx three days
INTACT SKIN and MUCOUS MEMBRANES	are the body's FIRST LINE DEFENSE against microorganisms
Intentional	in regard to medical therapy; incision (created for purpose)
Irrigation (not debridement)	Cleanse wound, applying warmth or cold, and as medication

Knowledge	know what you are doing and what supplies are needed (better to have a little more than you need)
Laceration	jagged irregular edges (longer to heal)
Large hematoma	may take a couple weeks; may need to be drained/aspirated with syringe; person may need surgery
Local factors affecting related to wounds	type of injury, infection, environment of the wound
Maturation	3 weeks (after injury) to 2 years

Mechanical debridement	wet to dry dressings
Medications	<p>Steroids; NSAIDS</p> <p>Antibiotics (mask or cover up signs of wound healing)</p> <p>Chemotherapy; destroys cells in the body; also increases healing time</p>
Non-absorbable	<p>nylon, silk, polypropylene (outer layers; sometimes used for approximation of wound edges)</p>
Nursing process related to wounds: Assessment	Emergency, Stable, or Wound assessment
NUTRITION	<p>Protein (wound healing); Vit A, B, C (cell stability &amp; immune system); trace minerals (present in foods and tissues in small amount - essential); copper (essential for several enzymes - necessary for hemoglobin synthesis and for carrying oxygen in blood)</p>

Open	break in skin and mucous membranes
Other cause	Weakening in blood vessel wall; trauma to area; look at HR and BP (should see first sign in vital signs - BP stays same but HR increases - eventually HR stays the same and BP decreases)
Penetrating	beyond three layers and possibly into deeper tissues and muscles
Perforating	enters and exits (two holes); ex. bullet all the way through
Phases of Wound Healing	Hemostasis, Inflammatory, Proliferative, and Maturation

Planning	Goals, Interventions, and Individualization
Possible Causes of hemorrhage	<p>dislodged clot: bumping or straining</p> <p>Infection: can cause pressure on area</p> <p>Slipped suture/staple: check that wound edges are together; no gaps or spaces; know what is approximating them; how intact are they</p>
Preliminary Information (procedure)	<p>Know if dressing is to be changed completely or just reinforced; know if there is a drain present (penrose - not usually in place, drains by gravity); know if wound needs to be packed; know what supplies are needed; know where the wound is located (is it draining?)</p>
Preparation for Dressing Change	<p>Preliminary Information; HW; Analgesics; Explaining procedure; Knowledge</p>
Primary Intention healing	<p>little or no tissue loss; edges are approximated (no gap); less infection risk (Ex. deep paper cut, knife cut, or surgical incision)</p>

## Proliferation

different depending on how much tissue is lost from wound  
EPITHELIALIZATION in PARTIAL THICKNESS loss like stage two ulcer  
FULL THICKNESS wound - heals mainly with granulation tissue (beefy red scar tissue - starts at base of wound and fills in); vascular, embedded with macrophages; some epithelialization and contraction of tissues on sides of wound to close; wound contracture begins at the side and brings the wound together as it heals

## Purpose of Dressings

Protection from trauma and pathogens; control bleeding (packing; direct pressure); promote healing: absorb drainage from wound and comes into dressing (peri = around; maceration); support: helps decrease stress on wound; Covering: keeps wound clean from pathogens & hides disfigurement; Thermal insulation/hydration: balance is key (adequate moisture)

## Purulent:

pus (usually infections drainage, but does not tell you for sure pt has infection);  
Tan, brown, green, or yellow; thick and creamy in consistency

## Sanguineous

thick bloody (mainly RBCs)

## Secondary Intention healing

heal from the inside out; take longer to heal (Ex. pressure ulcer)

Serosanguineous

mixture of sanguineous and serous - thicker darker red and lighter red and pink watery areas

Serous

Clear to yellow, watery fluid (damaged capillaries causing serous fluid to leak out) - fluid intake does affect it

SEVERITY (least to most)

Superficial, Penetrating, Perforating

Skin

body's largest organ (hand hygiene is very important)

skin of someone with dehydration

loses skin turgor



Skin wounds are classified by:	Status, Cause, Severity, Cleanliness
Small hematoma	blood blister on larger scale (usually absorbs in a couple days)
Special Wound Care	Irrigation and Sutures
Stable assessment	minor cleaned at that time
STATUS:	Acute, Chronic, Closed, or Open

Steri-strips	look like papery gauze material for support; either to close wound or after sutures or staples are removed, usually taken out 10-14 days after removed,
Subcutaneous	fatty; helps support dermis and epidermis
Superficial	epidermis and possibly dermis (thin) rubbing or scraping like an abrasion
Suture	Continuous, Interrupted, or Retention
SYSTEMIC FACTORS AFFECTING WOUND HEALING	Diabetes, Impaired oxygenation, and Medications

Tertiary Intention healing (third intention)	also known as delayed wound closure; going to be closed surgically but is left open for healing (abcess - pocket of infection)
Three layers	Epidermis, Dermis, and Subcutaneous (hypodermis)
Tinctures of Benzoine	sticky solution applied to steri-strips to help hold it together; a lot of people are allergic to tincture of Benzoine Be aware of allergies
Trauma	often caused by others
type of injury	paper cut vs. pressure ulcer

**TYPES OF WOUND  
HEALING**

**Primary, Secondary, or  
Tertiary intention**

**Unintentional**

**burn; MVA**

**Wound assessment**

**incision for OREEDA and  
drainage for C-COAL**

**WOUND HEALING  
COMPLICATIONS**

**Dehiscence, Evisceration,  
Fistulas, Hematoma,  
Hemorrhage, or Infection**